FL Phosphate - Draft Response to Greg Martin's Questions
Brad Jackson
to:
Carol Monell, Derek Matory
02/10/2011 08:11 PM
Cc:
"Randall Chaffins", Jon Richards
Show Details

Attached is a "first-cut" at the responses. I'll be availabe via phone (678-237-2946) till about 10am Friday. Feel free to call if you have any questions.

Thanks, Brad
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DRAFT EPA RESPONSES
QUESTIONS FROM GREG MARTIN, CHARLOTTE SUN
FEBRUARY 10, 2011

1: What is the expected effect of phosphate mining on background radiation levels in the Central Florida area? (It's assumed that he is asking how much TENORM may increase the radiation levels above natural background levels).

ANSWER:

Determining in the increase in radiation levels, above background, from Technically Enhanced Naturally Occurring Radioactive Material (TENORM) caused by phosphate mining is the purpose of the radiation surveys. EPA's current information is limited to data collected from the Coronet Superfund Site in Plant City, Florida and data collected by the Florida Department of Health. Based on this data, radiation levels have been observed from near background to many times (i.e., 20 times) above background.

2. Is EPA arguing that the standard of 5 picocuries per gram of soil be applied, while Florida is suggesting 500 mRem/yr?

ANSWER:

Although EPA's primary focus is on data collection, the question of an appropriate standard for evaluation of potential risks and cleanup has been discussed with the State of Florida. Nationally at other sites, EPA has conducted the cleanup of radium contaminated soils using a standard of 5 pCi/g (above background). The Florida Department of Environmental Protection Risk-Based Corrective Action (RBCA) regulations provide for the attainment of a protectiveness level of 10^{-6} (i.e., limit excess cancers from site-contaminants to less than 1 in 1,000,000). The Florida Department of Health has advised EPA that cleanups in residential areas would not be needed unless radiation levels pose a radiation dose greater than 500 mRem/yr (above background).

Selection of cleanup criteria at this time is premature. The collection and evaluation of the data relative to background is the first step in the process. After the evaluation of the data, various criteria will be considered along with other socio-economic factors. If it is determined that a response action is needed, a "Proposed Plan" will be issued for public comment that will thoroughly discuss the "pros" and "cons" of various options and criteria.

3. Can you be more specific regarding how EPA is proceeding at this point. Are consultations with state officials scheduled? If so, how many and when? Is their time period in which EPA expects to reach a decision on aerial flyovers?

ANSWER:

EPA's internal deliberations and consultation with the State of Florida are ongoing. EPA does not know when a decision may be reached to conduct an aerial radiation survey of the phosphate mining sites. If a decision is made to conduct the aerial radiation surveys, this decision will be announced publically before the start of the work.

4. What does EPA think could be accomplished by the flyovers?

EPA believes that conducting an aerial radiation survey would be an important first step in understanding the potential for increased radiation levels (above background) caused by TENORM from phosphate mining. This information could then be used by EPA to focus detailed ground-based assessments on the extent of TENORM. In the case of the "test survey" conducted at the Coronet Superfund Site, EPA was able to quickly and cost-effectively determine the areal extent of TENORM impacts from mining. Conversely, EPA was also able to determine the extent of areas "free" of TENORM.

ANSWER:

5. I've been told that USGS has conducted a flyover of the entire state to assay for uranium within the past couple of years. Is EPA aware of that flyover survey? If so, was it not at a fine-enough resolution?

ANSWER:

A series of aerial-based radiation surveys were conducted in the United States and Canada in the 1970's. These surveys were part of the Uranium Reconnaissance Program (URP) and the National Uranium Resources Evaluation (NURE) Program. These surveys were for uranium exploration and do not provide the resolution needed for the assessment of the phosphate mining sites. For example, the line spacing between flights for the uranium exploration surveys ranged from one to 25 kilometers. In the case of phosphate surveys, the line spacing would be approximately 100 meters.

6. Why is this project taking so long to resolve?

ANSWER:

Much time has been spent reviewing with the State of Florida and the Agency for Toxic Substances and Disease Registry criteria that could be used in the assessment and cleanup of sites. EPA continues to focus its efforts on the collection of the radiation data.

7. Please comment on whether EPA considered the risks to human health in deciding to delay for some 10 to 20 years taking further action to investigate and/or remediate these sites. The EPA has conducted site inspections and, in some cases, expanded site inspections on about a half dozen of the 21 phosphate sites between the 1980s and 2000. A couple of the site inspections and expanded inspections found elevated levels of

heavy metals and radionuclides in soil, clay settling areas, areas reclaimed with sand tailings, surface, surficial aquifers and groundwater. In a few cases, radionuclides and metals exceeded drinking water standards. In at least several cases, consultants recommended further analysis on a high priority.

ANSWER:

The consideration of potential risks to human health is an integral part of the environmental assessment process. Part of the assessment considers whether a site may pose an imminent threat to human health or the environment, and if not, evaluated further for potential long-term threats. In the case of TENORM, the levels are comparatively low and are not believed to pose any threats warranting immediate action. EPA is continuing the assessment of these sites to evaluate the potential for long-term threats to human health or the environment.